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ABSTRACT

Communication planning in developing countries is discussed in individual articles on theory, knowledge production and utilization, planning at the regional level, software, and rural development. A nutrition education project and three experiments in developing educational materials with feedback from villagers in Africa are described in the context of case studies. (CMV)

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COMMUNICATION PLANNING

U.S. Agency for International Development
Clearinghouse on Development Communication

Development
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Report
July 1978
No. 23

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USING THEORY IN COMMUNICATION PLANNING

For many field professionals, theory can be a dirty word, conjuring up images of egghead professors in musty offices scribbling out indecipherable mathematical equations and less understandable prose. And yet, these same field professionals use theory all the time, even if unwittingly. Whenever development professionals recommend a certain program, give advice, or prepare plans, they act on the basis of ideas about what will happen if certain things are done, in certain ways, in a certain order.

As we go about developing the field of communication planning, we draw on existing theory of a number of kinds, four of which are particularly relevant to communication planning. Three of these are reasonably well developed, though changing constantly: communication theory, planning theories, and development theory. The fourth, ever with us but too often overlooked, is the theory that each planner or group of planners evolves out of the experience of solving problems in a particular social, cultural, and organizational context.

Communication Theory

Communication theory deals with the process and effects of communication of all kinds. It is the kind of theory a planner uses, consciously or unconsciously, in selecting media, in designing messages and software, and in planning [illegible]. Thus, it is a *theory in planning* for something planners use to help them choose from among an almost endless number of communication options in light of certain goals.

Plainly, no single communication theory will make the planner's job easy. The various theories explain and predict the effects of different kinds or mixes of communication are related, but they are more or less helpful given different kinds of communication tasks, goals, and contexts. Information theory, for example, aids the planner designing mass campaigns intended to alter levels of information. But if the goal is to change attitudes or values, persuasion theory proves more useful.

(Continued on page 2)

ANOTHER LOOK AT KNOWLEDGE PRODUCTION AND UTILIZATION

Most communication planners have in mind some image of an information-communication system. This picture probably includes notions of how information is generated, formed into messages, and disseminated through channels to target or user audiences. The image may be of a well-defined and widely accepted model or of a highly experiential and personalized "style" of communication planning and communication. Either way, some implicit or explicit image of an information system guides the planner.

Those who plan what is labeled "development communication" often concern themselves especially with systems that attempt to communicate information on technology. Historically, relatively simple information-system models (an example of which is the "research, change-agent, linker, user model") have been employed. But numerous criticisms have been leveled at such systems, stating that (1) the assumption that knowledge flows only linearly, from researchers through technology to users, (2) authoritarian, persuasive, one-way communication flows "down" through the system), (3) the creation of dependent rather than collaborative relationships, (4) the assumption that only knowledge obtained through scientific research is relevant to problem-solving, (5) the assumption that technology can be *transferred*, which runs counter to the now-dominant recognition that an interactive communication process can result in the development of adaptive, intermediate, or improved indigenous technology, (6) the fact that the responsibility placed on "linkers" is usually far greater than that placed upon the linked, (7) the lack of concern with how benefits from "trickle-down" communication are distributed, and, probably most important, (8) the ineffectiveness of many programs based on present information-communication system models. Indeed, only in the last two decades have the systematic conceptualization and study of knowledge

(Continued on page 3)

Communication Planning at the Regional Level

In the developing countries, problems posed by the need to *organize* existing complex communication systems are of course comparatively few, a state of affairs that contributes to the expectation that introducing new media in such nations is comparatively easy. On the regional level, in particular, the trend is towards expecting too much of new telecommunication technologies on the assumption that they will improve the efficiency with which information is transmitted to the populace and will thus help assure the effectiveness of two-way communication.

To my mind, these assumptions and expectations pose some tough problems. We naturally think of communication as a means of diffusing information among the people or transmitting information from the authorities to the people. We are prone to think, further, that via such active diffusion of information populations become informed publics and that this transformation makes development programs bear fruit.

It is this kind of thinking that leads to a preference for electronic telecommunication media since such media are more capable than others of diffusing and transmitting information speedily and accurately over a wider range and are often cheaper on a per-target basis than others. The danger of basing a communication program on such technology is that the program can easily become a transmission-media program instead of a communication program.

Although information theory tells us that entropy on the receiving side should fall as highly developed communication media bring more information more quickly to the people, that is not the actual case. Often, as people find access to more information, their understanding of and involvement in the communication process deteriorates. This deterioration cannot be attributed solely to contradictions in the supplied information itself or to the low quality of information. It stems instead from the fact that some information-transmission systems using high-level technology are inherently incompatible with the structure and nature of people's

(Continued on page 7)

COMMUNICATION PLANNING

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Like all theories, communication theory is changing and growing. Present interest in dialogue as a form of communication, for example, grows out of the recognition of the importance of egalitarian communication relationships in which participants in the communication process both give and receive information and in which all participants (including the "sender" or initiator of the dialogue) can expect to change.

In my view, planning is the application of theory to reality in order to reach decisions about what to do, when, and how. If this view is correct, then planners will have to have a reasonable command of various communication theories and will have to know how to use these theories effectively . . . which takes us to planning theory.

Planning Theory

Planning theorists seek to explain the process of planning. Put another way, the theory of planning helps planners decide how to organize themselves for effective action.

The several important varieties of planning theory are also changing and developing. Early theory, that most often at the base of national economic and development planning, is often called *rational-comprehensive*. A system with which most development planners are familiar in one form or another, rational-comprehensive theory incorporates situational and problem analysis, the setting of specific and measurable goals and objectives, the development of alternative strategies for action, the evaluation of alternatives, administrative-feasibility analysis, and operational planning. Common tools are cost-benefit analysis, feasibility studies, quantitative models of various kinds, forecasting techniques, systems analysis, PERT (Program Evaluation Review Technique), and so on.

Planning of this type rests on the assumption that the future can be predicted in considerable detail. It requires a great deal of data and even more faith in the technology of planning and the capabilities of planners. It also requires considerable formalized and centralized authority for implementation.

Rational-comprehensive planning has not led to notably successful development programs. It has come under considerable criticism because of its centralized, top-down authoritarian character. Thus, for pragmatic and ideological reasons, new theories of planning are emerging. Among the replacements are *innovative planning*, which emphasizes changes in the structure and capabilities of institutions so that problems may be solved, and blends planning with implementation. Another new option, *incremental planning*, is based on the notion of gradual change within relatively short periods, the extensive use of process-oriented feedback, learning from experience, and decentralization or localization of planning. *Participatory planning* emphasizes active roles for program clients in the planning process, while *radical planning* reflects the importance of learning from the process of identifying and solving problems.

These new planning theories can be combined. Like various communication theories, different planning theories are more or less useful in different contexts.

Development Theory

Development theory is also in flux. Economic-development theories that reflect the general goal of increasing production and consumption and that emphasize high levels of capital investment and technology, long time-frames, and the trickle-down of benefits are being abandoned as their negative effects become more widely understood. New theories of development stand as radical departures from this model. They emphasize quality of life as a goal and reflect a view of development that takes in more than increased GNP and consumption. They also take appropriate technology into account. Those who adopt these theories see the pernicious effects of the existing international system as causal factors in underdevelopment and are less ready than others to attribute failure to develop to "backwardness" or "resistance to change."

Development theory, like communication theory, is a theory in planning. To apply this theory is to set the framework within which planners identify problems and apply communication theories. In many ways, consciously or unconsciously, a planner's development theory serves as the touchstone for all professional action. It is at least partially bound to social, cultural, economic, political, and organizational contexts.

Experiential Theory

There is no shortage of books on how to communicate, how to achieve development, how to plan. At the same time, relatively few planning teams actually apply the rich resource of ideas in quite the way the theory-builders intended. And yet, things get done, often quite well. Individuals and groups make decisions, write plans, allocate resources, and manage programs — often in predictable ways. In fact, we can identify patterns in the planning that grows out of their accumulated experience in dealing with problems over time.

These patterns form what we might call *experiential theory*, the sum total of strategies that planners have evolved to cope with problems in certain contexts. Experiential theory guides both the process and substance of planning. It determines, for example, such things as who is involved in planning, as well as which media are chosen.

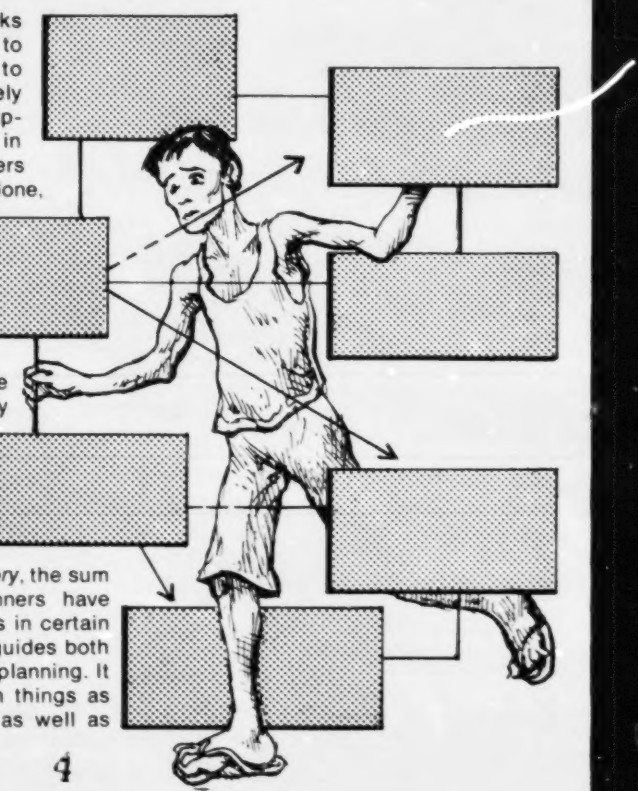
Experiential theory may turn out to be of considerable importance. At the very least, we should take stock of these theories before developing our own textbooks on communication planning since understanding experiential theory may enable us to utilize communication, planning, and development theory more wisely. Above all, this kind of theory can spark insights related to how communication planning can be done, or done better.

Conclusions

Even this brief review of theories in and of planning has important lessons for communication planners. First, we must accept the challenge posed by rapid change in various theory fields. Our research and development efforts must attempt to capture this movement and growth. Clearly, we should not base work in communication planning on theories that are being supplanted.

Second, the distinction between theories in planning and theories of planning can guide researchers and those who train planners. Effective communication planning will require (1) a thorough understanding of how theories of both kinds can be applied to the task of planning communication systems and activities and (2) trained planners competent in the use of both kinds of theories.

Third, critical to the effective use of theories for planning — a major goal — is the ability to select and combine theories to fit particular contexts. To choose theories and apply them effectively, planners will need to be familiar with a range of theories, be able to match them with different problems and contexts, and be equipped to analyze their own planning situation as a basis for theory choice.



Thus, in our initial work on communication planning, we might do well to develop "design" principles, which help planners choose and use theories. One such principle, for example, might help planners relate organizational structures and sociocultural variables to different kinds of communication goals. Taken together, principles that cut across the theories of communication, development, experience, and planning may turn out to be a theory of communication planning.

A thorough grasp of experiential theories and their contexts could help planners link communication planning with new developments in theory fields, make practical use of the distinction between theories in planning and of planning, and develop principles for selecting and combining theories of various kinds. Grounded firmly in the reality of planning, research and development efforts will have a higher probability of being used. Steeped in experiential theory, they may be a rich source of original ideas as well.

■ *John Middleton, Assistant Director for Planning and Evaluation, East-West Center Communication Institute, Honolulu, Hawaii*

Knowledge (Continued)

production and of information-utilizing systems been emphasized.

Some recent research, conceptualization, and model-building does appear to hold up under some of the criticisms made of past systems. While nobody claims to have developed *the* system, a review of some of the ideas recent systems incorporate may trigger some new insights, provide communication planners with a modified framework within which to organize past communication and planning experiences, and sharpen the edges of the conceptualizations from which planners work.

A New Prototype

One such information system draws heavily on the work of Havelock, Guba and Clark, Rogers, Gideonse, and Rothman and Roling. This paradigm embraces six categories (or stages) of interrelated functions, activities, and processes that seem distinct enough to merit separate treatment. (For fuller details, see *Knowledge Production and Utilization: A General Model — Third Approximation* by Peter M. Meehan and George M. Beal, Sociology Report No. 138, Department of Sociology and Anthropology, July, 1977, Iowa State University, Ames, Iowa 50011.)

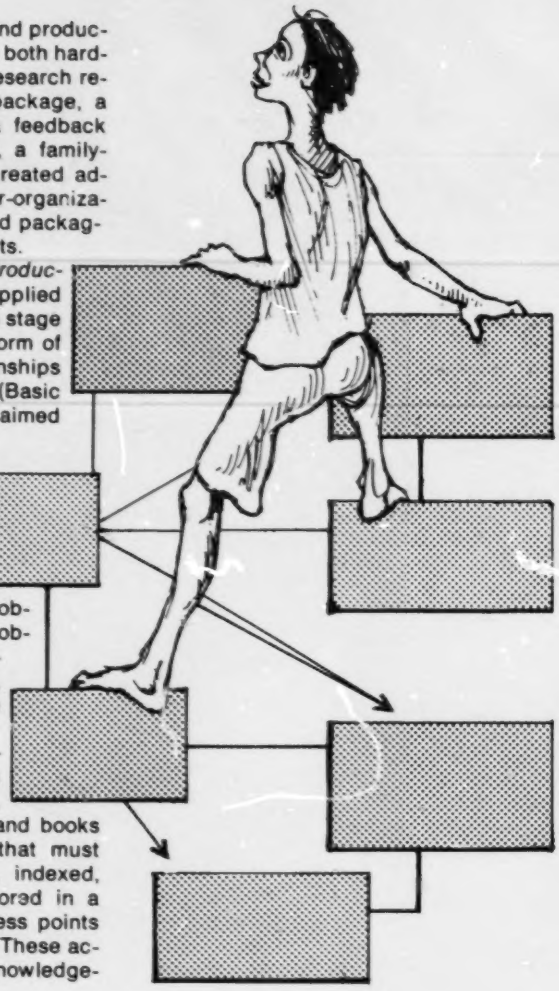
The linchpin of this paradigm is continual interactive communication. Actors in each stage must meet the needs of users in other stages if the needs of the ultimate users (the target audience) are to be fulfilled. Each of the stages between research and adoption/utilization represents in miniature the whole process of knowledge production and utilization. In each, the actors begin by identifying specific user needs, planning and producing needed products (including both hardware and such software as a research report, an information search package, a brochure, a radio program, a feedback procedure, a training module, a family-planning campaign, a newly created advisory committee, and an inter-organizational coordination council), and packaging them to appeal to the clients.

Stage One/The Scientific Production of Knowledge. Basic and applied research are carried out at this stage to produce knowledge in the form of verified statements of relationships between and among variables. (Basic research here means research aimed at producing knowledge for its own or discipline's sake, while applied research here means that aimed at solving "real world" problems.) The types of knowledge obtained from both kinds of research often prove necessary, but not always sufficient, to the solution of a given problem.

Stage Two/Knowledge Management. Stage-one activities result in a vast array of articles, reports, papers, monographs, and books presenting research findings that must next be monitored, screened, indexed, catalogued, packaged, and stored in a readily retrievable form at access points for later use and dissemination. These activities may be designated as knowledge-management.

Stage Three/Knowledge Translation. Knowledge translation involves the synthesis and conversion of research findings into information that product developers can use to solve practical problems. At this stage — one of the "meeting points" of abstract, scientific knowledge on the one hand and practical knowledge and client problems on the other — highly skilled translators or linkers with a dual understanding of the scientific and practical conceptions of the same problem code and recode the clients' formulation of a problem and relevant descriptors of available scientific knowledge. Scientific research is synthesized, generalized, and brought to bear on clients' problems. Effort at this stage may produce papers, reports, presentations, or consultations on guidelines and other information on product development.

Stage Four/Product Development. At the product-development stage, "translated" scientific knowledge is combined with knowledge of existing or created user needs, and products with the presumed potential to meet these needs are developed. The orientations to product development vary here. Sometimes the emphasis is upon discovering the needs and wants of target audiences and developing goods and services to meet these needs; in other cases, the product is developed before its use is "promoted."



(Drawings by Tom Chalkley)

Product development of both software and hardware usually includes activities such as problem-formulating, determining the product function, developing performance and appeal specifications, inventing or designing alternative products, analyzing and assessing alternatives, selecting the best solution, designing prototypes, fabricating prototypes, testing and retesting prototypes, making and packaging marketable products, and transferring these packages to distributors.

Stage Five/Product-Dissemination. Once potential solutions to user needs or problems are developed, getting them to the clients becomes the goal. Activities at this stage usually include making sure the product and its uses are fully understood, designing dissemination and communication strategies, distributing the product, adapting and installing it, and monitoring product performance.

Stage Six/Product Adoption and Utilization. Product adoption and utilization is the process whereby users discover and diagnose problems, locate solutions, test solutions, adopt solutions, and effectively assimilate solutions.

If no answer to the need or problem is readily available, proponents of the model argue, that very lack will re-initiate a communication process that includes all the

Knowledge (Continued)

previously discussed steps. Eventually, adequate and appropriate knowledge is found, developed into a solution, packaged, and communicated back to the user for testing and possibly for adoption and utilization.

Implications of the Model

In the paradigm described above, knowledge production and utilization receives greater emphasis than research. It reflects the recognition that types of knowledge other than that developed and written by research scientists can contribute to problem-solving. It is posited on the belief that relevant knowledge can (and in some cases must) be provided by linkers, product developers, disseminators, and ultimate users.

This paradigm does not assume a one-way flow of knowledge from researchers to ultimate users. It is based upon the recognition that knowledge and communication move back and forth from one stage to the next, rather than flow smoothly from the beginning to the end of a utilization chain. Indeed, the often iterative process is marked by repetition and recurring action.

Finally, this model allows for the collaborative production and utilization of knowledge. Its use does not lead to relationships of dependency. Further, it facilitates the development of intermediate technology and appropriate technology while it fosters adaptive research and development, and user trials.

This paradigm is free of some of the flaws that rendered its predecessors of dubious worth — that much is clear. But the practical value of the paradigm has yet to be established. Can it provide background or otherwise serve communication planners? To this question, each planner must provide answers, even if doing so means sweeping away or revising some long-held, and therefore precious, mental images.

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Readers are invited to submit typed manuscripts of no more than 1000 words and to send in photographs.

Communication and the Global Economic Order

When we say the world has shrunk, we are talking in large part about recent fantastic advances in communication technology. Such innovations continue to affect the international economic system through their influence on trade flows, currency exchanges, and capital flows. In turn, these flows are generated or at least regulated by international organizations like the IMF, the World Bank, and the GATT; by regional customs unions like the EEC, the COMECON, and ASEAN; by multinational corporations; by cartels like OPEC, and by individuals with liquid resources.

Communication in Int'l Economics

The communication channels through which economic information flows are often maneuvered to give a special advantage to a particular country's trade balance and currency, as was the case in August of 1971 when the U.S. "untied" the dollar from gold and imposed a 10-percent surcharge on imports and again in 1973 when OPEC quadrupled oil prices. Information on these policy changes had been closely guarded, and the changes took the world by surprise.

When OPEC upped oil prices in 1973, trade and communication channels carried projections of oil supplies and prices so rapidly that oil-importing countries were quickly placed on the defensive. Telecommunication networks between major central banks helped Japan, West Germany, France, the U.K., and the U.S. forecast their oil import bills and formulate policies to combat the ensuing internal inflation. Meanwhile, oil-surplus funds gave a boost to the telecommunication industry, since international telephone, telex, and news-flow systems were kept buzzing with the latest consumer demands emerging from the Arab world.

In general, when international communications falter and when networks carry confused or self-contradictory information, currency crises arise and capital flows become erratic. Uncertainty grips governments and banks, and every rumor of devaluation of any of several major currencies leads to frenzied activity on "spot" and "forward" markets. In such cases, speculation by multinational corporations, resource-producing countries, and individuals has disastrous consequences on the balance of payments of Third World countries.

Int'l Communication & Development

Developing countries were the worst victims of the oil crisis and the currency upheavals. Not only did they lack resources to meet the rising cost of oil, but they faced rising prices of oil-based products, particularly fertilizers. Their economies simply lacked the resiliency needed to adjust to their growing trade deficits, and they received no help from existing international communication networks, which might have helped cushion the adverse effects of trade imbalances by presenting LDC goods and services as competitive with developed-country products.

Granted, international trade policies have gradually begun to dismantle tariff barriers and quota restrictions that operate against LDCs, to move away from major reliance on import-substitution, and to promote the LDCs' goal of industrialization — even though the flow of capital and technology has yet to change course. But these changes are not adequate. What is needed is the systematic exploration by LDCs of international export markets. For example, multinational advertising agencies already operating in Third World countries could be used at reasonable cost for tapping European, American, and Japanese markets. But, faced with widespread poverty, low productivity, and high unemployment, LDCs are not in a position to invest in telecommunication services to assist in their drive to increase exports and to get tariffs and other trade barriers removed.

Just as Third World countries need to explore developed-country markets for their primary products and manufactures, advanced countries need to get their technical information goods and services to LDCs. Since the information sectors of the industrialized countries have already reached saturation levels, exporting information products and technologies has become imperative. This saturation has reached crisis proportions and has spillover effects in developing countries, whose dilemma worsens as population-growth rates overtake the rate of capital formation.

Fortuitously, information systems are fast becoming more affordable. Computer-packet switching networks, for example, can be used to meet the needs of agricultural research centers, and multiple-access satellite systems like the U.N. AGRIS program can reduce service costs and give LDCs access to advanced technical-information bases. But the new international information order, which is being established to find answers to some of these problems, entails more than the transfer or creation of new information systems and must be considered the co-equal of the new international economic order.

The New International Economic Order

The essentials of the new international economic order are non-reciprocal preferential treatment of LDC exports, limitations on the scope of the activities of multinational corporations in developing countries, generation of reliable ways to transfer appropriate technology, and a reduction in the burden of debt-servicing. These policies are not new nor inconsistent with existing trends in world trade, though collective bargaining by the Third World is.

THE JOKER IS WILD!

These playing cards — one of many innovative teaching aids developed by Zahia Marzouk, Vice President of the Family Planning Association of Alexandria, Egypt — are used to impart basic literacy skills and to spread the family-planning message at the same time.

Suits are organized by sounds, numbers have been replaced by familiar objects (vegetables, clothing, etc.), and the jokers bear pictorial representations of contraception.

Women learn to play several traditional card games with these untraditional decks and take the cards home to teach the novel literacy games to their neighbors, husbands, and children.

If the new international economic order is to become a fact, then LDCs have to express their needs for a two-way flow of information goods and services, as well as of industrial goods and raw materials. Advances in communication systems will not only enable them to improve their health services, education services, and agricultural productivity, but will also help them to organize regional trade blocs and thereby increase their bargaining strength and the potential for a freer flow of goods. Under this new dispensation, the use of sophisticated communication hardware and software could reduce the probability of conflict and confrontation by making international communication faster and clearer.

The World Information Order

The convergence of the economic order and the information order — or more broadly, a communication order — occurs at the level of technology transfer and the investment it entails. In the realm of politics, a new worldwide communication order could reduce international tensions. After all, communication has been described as the key factor in solving world problems of hunger, poverty, disarmament, and peace-keeping.

The needs of different countries for communication systems vary, but essentially the free flow of information goods and information services is as vital as the free flow of industrial goods and services. Indeed, the output of the manufacturing sector depends upon communication research and design, business machines, legal services, accounting and managerial services, and other information goods and products — the use of which adds to the costs of non-information goods. In a wider context, information systems provide the basis for capital accumulation, since this accumulation is highly dependent upon effective and efficient information flows.

Convergence and Synthesis

Since in both the new international economic order and the new international communication order the need is for an even flow, a critical problem is the communication gap between the economist and the communication scientist, both of whom are interested in helping the Third World.

Common ground is not the problem. Both product flows and information flows are subject to the processes of production, exchange, and distribution. Both information and non-information goods are subject to opportunity-cost considerations and to investment analysis. And optimizing investment in either sector requires a full understanding of when and how technology transfers and of how economies of scale affect unit costs.

The two orders need to be envisaged as an integrated whole, instead of as isolated operations. If they were, Third World countries haunted by fears of technological domination by the industrialized world could relax their suspicions, and international relations would likely become more stable.

In the ultimate analysis, integrating the two orders will entail collaborative planning by international organizations and policy-makers at the national level. Their task will be to frame coordinated agreements for balanced trade and communication flows.

■ *Meheroo Jussawalla, East-West Communication Institute, Honolulu*

Planning for LDC Women

Four recently published documents offer project planners broad guidelines on how to identify and help meet the social and economic needs of Third World women. (*DCR*'s editor welcomes accounts of fruitful or failed attempts to implement such guidelines at the project level.)

"Guidelines for the Integration of Women in Agricultural and Rural Development Projects," Document No. W/K6542, FAO, Rome, May 1977.

"Appendix Q" in *Communications Technology for Development: Guidelines for Consultants Working with the Agency for International Development*, Howard Leavitt and Peter Boynton, Academy for Educational Development, December 1976.

Peace Corps Program & Training Journal, Vol. IV, No. 6, 1977.

"Guidelines on the Integration of Women into Development," Document G3100-1, Programme Policy and Evaluation Division, UNDP, New York, February 1977.

CDC Publications

Copies of the following back issues of *Development Communication Report* and its forerunner, *Instructional Technology Report*, are available at no cost from the Clearinghouse:

No. 22. "To and From the Field: Communications and Agriculture," April 1978.

No. 21. "Reconsidering Print," January 1978.

No. 20. "The Nutrition Message & The Mass Media," September 1977.

No. 19. "Communications & Development: Two Views," June 1977.

No. 18. "Mobilizing Media for Development: A Question of Will," April 1977.

No. 17. "Telemedicine: Health Care for Isolated Areas," January 1977.

No. 16. "Communication and Integrated Rural Development," October 1976.

No. 15. "Health Education By Open Broadcast," July 1976.

No. 14. "Film in Development," April 1976.

No. 13. "Uncomfortable Issues in Instructional Technology," January 1976.

No. 12. "Folk Media in Development," September 1976.

No. 11. "Perspectives on Educational Technology," June 1975.

No. 10. "Technology and Educational Reform: The Case of Ivory Coast (Part 2)," January 1975.

No. 9. "Technology and Educational Reform: The Case of Ivory Coast (Part 1)," October 1974.

No. 8. "Technology is the Answer . . . But What Was the Question?" July-August 1974.

PLANNING DEVELOPMENT-COMMUNICATION SOFTWARE

LESSONS FROM SITE

In June 1976, a joint Indian Space Research Organization-National Aeronautics and Space Administration study found that a terrestrial-cum-satellite TV system would be the most cost-effective television system for India. A one-year long pilot project was proposed to provide insights on the configuration of such a TV system, its software, hardware, management, and costs. This was the SITE project, the Satellite Instructional TV Experiment, conducted in 2,338 villages in India from August 1975 to July 1976, using a NASA satellite.

The primary responsibility for message-making was with the specially set up TV Satellite Wing in AIR (All India Radio), in the Ministry of Information and Broadcasting. With only two years to the first day of transmission, this Wing had a lone Director, one typist, no budget and no staff — and a 1,300-odd hours transmission requirement for August 1975-July 1976! In July 1974, three studios came up.

The systems analysts and the specially-recruited summative evaluators felt that empirical data on village conditions, rather than only the opinions of overworked experts in government secretariats far from the village, should determine the objectives and curriculum. But whose job was it to prepare these? Shouldn't each development agency that wanted broadcasting support do its own study of communication needs in the villages, define instructional goals, and specify a content plan for each program that the creative genius of the broadcasters could then flesh out? A series of meetings was held at state and central government capitals, at which experts drew up a "list of topics" for the programming organization. Participants did try to supply scripts as often as they could, some ministries doing better than others, but coordinated scheduling of activities was always a problem in an inter-ministerial undertaking in which each agency had different priorities.

So, the summative evaluators in the space agency (which was located over a 1,000 miles from the producers), with academic training in anthropology, sociology, psychology and communications — who had never heard of terms like "formative evaluation" — decided they would try to provide TV producers with a picture of village life, village needs, and villagers' reactions to some pilot programs, and with input evaluation data. All this was to be in addition to the "product" evaluation they were hired to do, on which they were already behind schedule and understaffed.

Context evaluation provided profiles of life at the village level and an assessment of needs in the SITE instructional areas. Audience profiles were based on ethnographic data collection and secondary sources, and presented non-technical generalized pictures of dialects spoken, food habits, dress, religion and ritual, and a typical working day. The producers reactions were that the reports were "too simple."

Needs were assessed by interviewing district, block, and village-level officials in agriculture, health, and education, since there was no time to study the villagers' perceptions directly. It was realized that there were big differences in the villagers' and officials' opinions, particularly on the causes of problems (one open-ended exploration of programming suggests that the content of the reports was not used). Of uneven quality, these assessments too were first attempts like many other things in SITE. Apart from being written documents, they came when producers were busy canning programs — when the time for planning content and formats had passed.

Input evaluation was supposed to consist of testing of the prototype programs in the village. With each producer canning one feature-length production a month from the word "Go," there were no specially designed prototypes to test. Whatever was made first was tested, and thus one of the two sessions proposed per state was completed. This was in the face of monstrous problems in obtaining portable VTRs for village playback and of engineers' reluctance to let studio equipment face dust storms, heat, and the Monsoon rains.

It was hoped that the findings from the audience profiles and the needs assessment would, along with the expertise from the specialists, help software planners define precise goals. The pretesting was to help finalize persuasive appeals and forms. But SITE software had gotten organized too late.

The marvellous thing about the SITE software project was not last-minute attempts at formative research or the fact that no formative research was planned. The miracle is that there was a passable program ready to go on the air every day, for four hours a day!

With so many SITE scars to learn from, it is little wonder that the one-time summative evaluators in the space agency actively advocated basing full-time formative researchers in each development-TV studio in the SITE Continuity Phase (1976-79). At least ten other lessons can be learned from SITE, too:

1. Budget adequate time to breathe, to do formative research, and to produce materials and programs without going crazy.

2. Recruit artists, producers, and writers who are committed to the Development Cause rather than to art for its own sake.

3. Recruit researchers who are dedicated to the Development Cause rather than those who are monogamously wedded to Science for their own sakes, to research methodology for Fear's sake, and to publishing in academic journals for Increments' and Promotion's sake.

4. Recruit researchers who have a feel for the strengths and limitations of the medium used, be it chalk or the TV camera.

5. Recruit researchers who are sensitive interpersonal communicators and who can link the subject specialist, artist, and audience in order to develop a good "instructional design."

6. Recruit producers and researchers who are excited about creating a new method of collaborative *program development.*

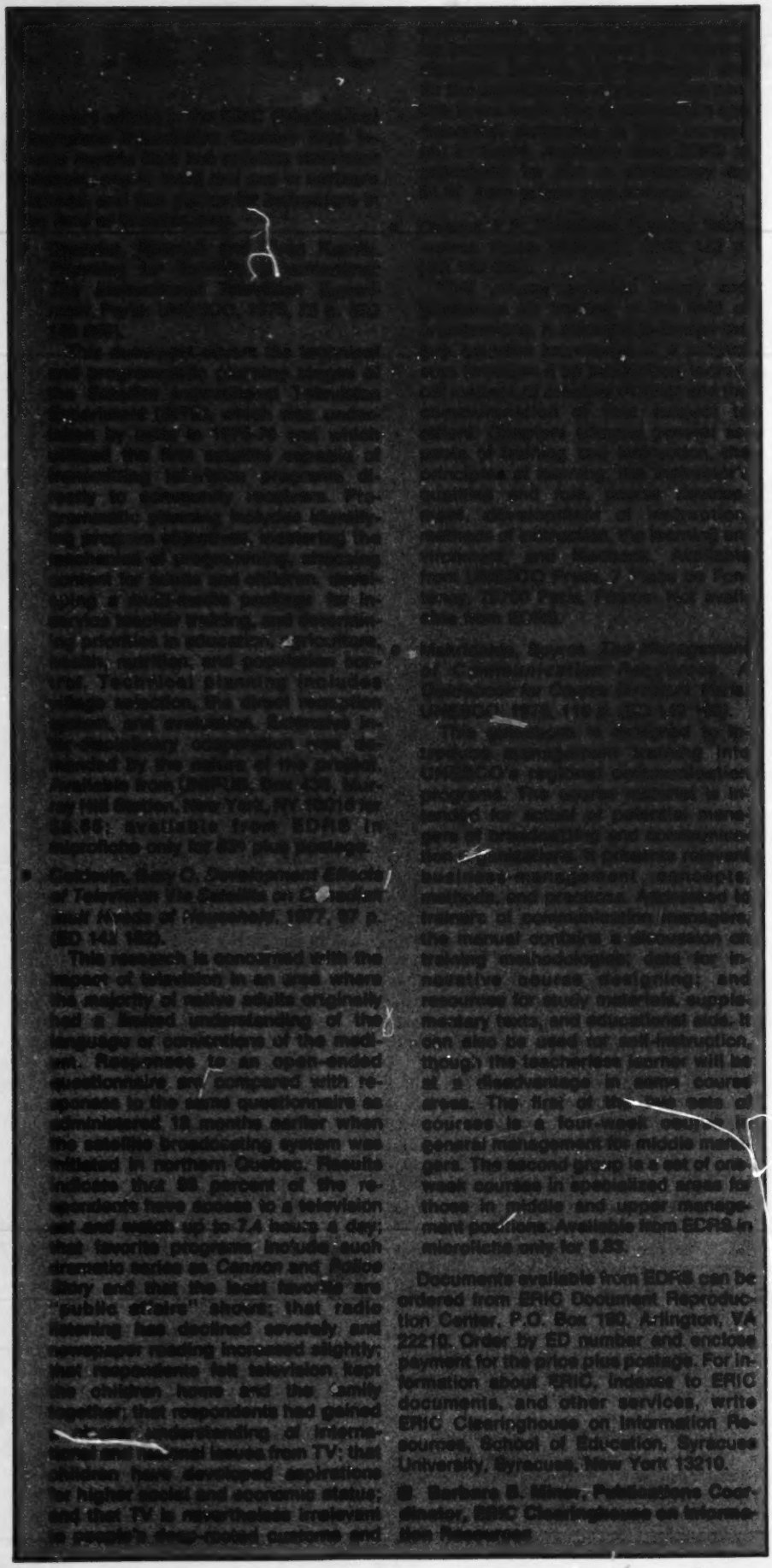
7. Make sure that top organizers are in full and honest agreement on the superiority of the team method, and support it wholeheartedly despite deadlines and protests from both researchers and producers.

8. Be certain that you have a utilization plan and have a utilization staff in the field to follow up with post-program activities.

9. Remember that no single method of formative research is appropriate for all goals, all audiences, all media, all cultures, and all times. Local combinations and methods, be they quick and dirty, must be designed for local needs.

10. Be patient. Even if first attempts at formative research are not reflected in programming quality in the beginning, they could determine the shape of the fully evolved system, as they did in SITE.

■ *Bella Mody, Stanford Institute for Communication Research*



Regional Planning (Continued)

everyday communication processes, which in most developing countries are person-to-person.

As the media become more complicated and more efficient, the information they transmit becomes less personalized. And when transmission of depersonalized information increases one-sidedly, one of two things happens. Members of the target audience may begin to demand the right to respond to the information supplied — not merely to ask questions but also to refute the messages presented, present opposing views, and initiate new messages from their side. The more negative and more likely outcome, however, is that they will simply disregard the messages and retreat into skepticism.

While not necessarily easier to perceive at the regional level, the problems of disaffection and skepticism are both more acute and more amenable to solution at the regional level than at the national level. Naturally, people are more skeptical of development directives that central authorities issue on regional problems than of centrally disseminated messages related to national problems: they are often in a better position than centralized authorities to assess regional problems and the validity of proposed answers to them.

Given the foregoing, two points on planning the communication system of the regional-level development program need to be made. The first is that the meaning and role of communication within the program need to be analyzed with greater care. If the role is merely to transmit messages, for example, just how the information fits into the process of people's social communication must be studied in advance of project implementation. In this case, how far transmission of depersonalized information mediated under the mechanical system will fit into the communication life of the people of the region must be determined.

The second point is that, during the design stage, the target audience's doubts, dissatisfaction, and possible rejection of the information supplied or of the supplying system itself should be anticipated, and the program should be planned accordingly. Doing this will require surveying with utmost care the scale, structure, and nature of the communication activity of the people of a region — both before and after a new system is introduced.

If a problem now afoot in the industrialized nations is to be avoided, people's awareness of their own participation in the communication-media system needs to be raised and monitored, and flexible principles for formulating a system matched to social realities need to be devised. The alternative is living with entrenched skepticism among viewers and listeners.

■ *Kazuhiko Goto, Senior Researcher, Japan Broadcasting Corporation (NHK)*

A Communicator's Checklist

1 Jean Marie Ackermann, media editor of *International Development Review*, pays to the language of film criticism the kind of rapt attention that is required if that language is not to become confused with the language (or "grammar") of the film itself. Her own prose kicks up dust but does not give the impression of having been written on horseback. Yet, a bit paradoxically, it actually bears some relation to the best films on development — which tend to do the same thing.

Ackermann wrote only six of the twenty essays in *Films of a Changing World — A Critical International Guide, Vol. II*, but the stamp of her judgment and her editing is upon all. Taken as a whole, the collection treats films as cultural artifacts, personal statements, technical achievements, politicizing tools, works of art, and sources of information. In the volume's preface, Ackermann begs *IDR's* editor for continued indulgence as a traveler on a "somewhat exotic byway in the [journal's] pages," but in view of the breadth of interest the essays exhibit, the remark comes off as a private joke.

Not every essay approaches film from all these angles. The well-rounded effect of the whole set stems instead from cross-references provided in Ackermann's prefaces and from a spirit of debate that the editor seems to look for when she picks articles for publication. Beyond this, many contributors have themselves had some filmmaking experience (a virtual guarantee that they won't write about film as a one-dimensional entity) and fully half of them live in the Third World (a fair indication that their perspectives on development have grounds in fact).

For every consensus in this book, expect a head-on collision. The essayists seem to agree at least tacitly, for instance, that a director has no more right to assume anonymity than to make a home movie in the name of development: both approaches are subversive because they are irresponsible. On particular films and filmmakers, though, opinions differ wildly. (For sport, compare film scholar Carrie Sembene's assessment of her husband Sembene Ousmane's work as "denouncing existing ills in his society" and dedicated to "social realism" with Bennetta Jules-Rosette's contention that Sembene's film *Mandabi* presents "a theatrical version of tradition and change that represents daily life in Africa much as American television situation comedies reflect the American social milieu.") Perhaps this kind of intellectual orbiting merely reflects the truism that principles are less amenable than tastes to attack. But a more positive construction is that development filmmakers have not yet become hidebound, have not yet mummified principles into formulas.

The only complaints about this volume that don't sound peevish are related. One is that the contributors' credentials (though seldom their ideas) tend to be hardline academic — more otherworldly than Third Worldly. The other is that too many essays focus on films that few will ever have a chance to see. Ackermann repeatedly laments this last fact and makes what amends she can by way of giving information on costs and availability. Then too, criticism itself ostensibly affords one means of bringing good films out of the closet. But the problem remains and makes the practical reader uneasy.

Full use of this book awaits free access and full use of the films discussed. But had Ackermann waited for more equitable film-pricing practices and film-distribution policies, the "baby" of development filmmaking would have suffered incalculable and unrecoupable losses for want of an important formative stimulus.

Films of a Changing World: A Critical International Guide, Vol. II, can be purchased from the Society for International Development, 1346 Connecticut Avenue, N.W., Washington, D.C. 20036, U.S.A. for U.S. $4.00. ■ *K.C.*

2 Suzanne Kindervatter's manual, *Learner-Centered Training for Learner-Centered Programs*, is useful to workshop planners interested in increasing learner participation in structured training activities. The author describes in detail an approach for applying learner-centered training techniques to a specific adult-training situation in Thailand. Emphasis is placed upon the processes used to involve participants actively in workshop planning and implementation. Issues such as sharing leadership, learning by doing, problem-posing rather than problem-solving, and developing materials-production skills are treated. Descriptions of human relations exercises that have been adapted creatively to meet Thai cultural needs are presented.

Most of the text describes in detail the workshop operation; but a thought-provoking introductory section puts forth the notion that while Thai culture may seem ill-suited to participatory learning activities, in fact a deeper analysis of Thai, and indeed Asian, values indicates that Western learner-centered approaches such as Freirean processes do find expression in Thai culture through such concepts as "khit pen" (which can be translated as critical or rational thinking). Unfortunately, this contention is not linked to the description of the workshop activities. The reader is left without guidance on how "khit pen" and critical consciousness are related.

Also misleading to individuals who know Freire's work in another context is the author's use of Freirean terminology to describe various phases of the workshop. Moreover, readers find out little about who participated, how participants were selected, or what happened after the training. A final flaw is the lack of evaluation evidence, which weakens the author's case for learner-centered approaches.

Those seeking ways to adapt traditional human relations techniques to different cultural settings and different educational goals will find this manual a useful reference. The workshop design and structure are sound, and the presentation is logical and coherent. If somewhat flawed as a "think piece," Kindervatter's work is most helpful as a checklist of workshop design concerns for learner-centered practitioners.

Learner-Centered Training for Learner-Centered Programs is available for $3.00 from the Center for International Education, University of Massachusetts, Amherst, Massachusetts 01002, U.S.A. ■ *W.S.*

3 This 50-page booklet, "Audio Cassettes: The User Medium" by Sumanta Banergee, contains a brief history of the development of audio cassette technology, advice on operation and production, and a summary of a variety of developmental applications of cassettes. The monograph provides a useful overview of cassette uses and of the medium's particular advantages with respect to local production, feedback, and audience participation. Examples from Jamaica, Guatemala, the Philippines, Pakistan, East Africa, India, and Ecuador are cited.

Emphasis falls squarely on the use of cassettes in the field. More particularly, cassettes are now the basic tool of the radio reporter, according to Banergee, and have expanded greatly the possibilities of producing broadcast-quality programming in the field. This is particularly important in view of the logistical problems of duplicating and distributing multiple copies of cassettes.

One of the series of UNESCO Monographs on Communication Technology and Utilization, "Audio Cassettes: The User Medium" can be obtained for U.S. $3.00 from UNESCO, 7 Place de Fontenoy, 75007, Paris, France.

■ *Heather Hudson, Academy for Educational Development*

4 Sources of information are among the most prized possessions of persons involved in technology transfer. The Development Reference Service of the Society for International Development (SID-DRS) has produced a sourcebook that will surely occupy a favored reference spot on many shelves. *Information Sources for Development* is a commendable effort to identify the elements of what is called the "primary information network." The "bodies" listed in the sourcebook have "agreed to answer requests for documentation or information submitted by *developing countries* [ital. mine], or on their behalf, without charging any fees."

By dividing the network into various sectors such as international, national, regional, and specialized institutions, the SID-DRS places emphasis on the open-ended aspect of this network, which they underscore by appealing for further sources of information. SID-DRS's intent is to foster a network within and for Third World countries, so Sources, make yourselves known to them!

Information Sources for Development (in English and French) may be obtained from the Society for International Development, Development Reference Service, 49 rue de la Glaciere, 75013 Paris, France. ■ *J.B.*

5 The East-West Culture Learning Institute at the East-West Center takes seriously its responsibility for examining the many facets of cross-culturalism. Representative of this continuing effort is the latest volume (number 5) in the series, *Topics in Culture Learning*, which is divided into one group of articles contributed by participants in the culture-learning process, and another that documents research in the field.

The wide variety of topics covered underscores the interdisciplinary approach now considered necessary to the cross-cultural social scientist. Problems of teaching, linguistics, historical imperialism, economic deprivation, and psychology are among those reviewed. Several articles discuss designing cross-cultural research projects and stress the value of coordinated international cooperation and collaboration despite severe budgetary restraints. While most of the articles are specifically oriented toward academia, several of them cross the academic-culture barrier to give the layman insights into such things as a Pacific journey using star compass navigation skills, American popular culture under cross-cultural attack, and the process whereby adult Israeli immigrants absorb each others' cultural pasts while together learning their way in a new cultural present.

Topics in Culture Learning (Volume 5, 1977) can be obtained from the East-West Center, East-West Culture Learning Institute, 1777 East-West Road, Honolulu, Hawaii 96848, U.S.A. ■ *J.B.*

6 In *Third World Mass Media and Their Search for Identity*, media analyst John Lent does for development communications something like what Martin Luther did for 16th-century Christianity. He publishes a list of grievances intended to be life-giving to the institution he cares most about. Lent's notions of reform are an academic's and his "articles" seem a bit rambling, but his heart is unquestionably in his work.

Lent takes as his twofold task the accumulation of data on the mass media in the Commonwealth Caribbean and the rangy analysis of that data in support of some self-evident truths and some speculation. His findings hold good to some extent for the whole developing world, he says, since the Commonwealth is fairly representative of other developing nations. On this count he may be right — but only in the sense that Cuba can be considered representative of communist countries, for to ignore what it means to have the United States next door is practically to hoist the "flat earth" banner. Lent almost harps on the subject of U.S. influence, though, so his argument merely wobbles where it might be expected to collapse.

What fascinates and annoys Lent is how far the Caribbean Commonwealth has been from the concerns of most communication analysts considering how close it lies to the world's biggest media laboratory, the United States. "Why," Lent lets fall in a line that only seems mock-serious, "have scholars not ventured into the study of the communicative capabilities of calypso, steeldrum bands, and political meetings?" Why, indeed? For those who doubt that finger-snapping tunes can spark social change or that calypso lives up to Trinidadian writer V.S. Naipaul's claim that it is "the ballad, the broadsheet, the *Punch*, and *New Yorker*" of his country, Lent offers this excerpted evidence from "Dan the Man," written in 1963 by the "Mighty Sparrow":

De lessons and de poems dey write an' send from England
Impress me they were trying to cultivate comedians.
Comic books make more sense,
You know it is fictitious without pretense,
C.O. Cutteridge wanted to keep me in ignorance.

His point made, Lent himself does not, however, devote much energy to the exegesis of comic books or calypso — much less to the *reggae* songs that have found such a steadfast following outside of Jamaica. In the long run, Lent's ear for music is less developed than his nose for news. His first love is journalism.

About print and broadcast journalism in the Commonwealth Caribbean, we learn from Lent some startling facts. The British West Indies didn't know local programming until 1934, when some impassioned cricket fans turned into sports commentators for an important match. Of the four major news agencies covering the Commonwealth, only Reuters operates its Caribbean Desk in the Caribbean. In Jamaica, local TV programs cost twenty times as much to produce as imported material does to run. Most island governments issue work permits to right-thinking journalists only and revoke necessary credentials to express displeasure. Sixty to 80 percent of all TV fare aired in the islands is foreign-made.

Statements like these and pages of documents and interviews coalesce into a familiar pattern with a double identity. The first resemblance is one that Lent might be stretching in his title, the story of media development in poor countries everywhere. To be sure, with the axes and cankers of government interference and without a lingua franca and adequate training and production facilities, the Caribbean looks for all the world like a microcosm of Third World media development.

But the Caribbean is also an exceptional case. Besides proximity to the U.S., an accurate picture of the Caribbean Commonwealth must show (as Lent's does) that some of the region's communication problems are peculiar to nations composed of islands. It must also show (as Lent's does) that the urban flavor of developing-world media content does not pose insuperable problems in the Caribbean, where the rural/urban distinction means little.

So, the analogy that matters ultimately is that between the Caribbean's own history as a colonized region and its present status as a force-fed consumer of foreign media products. Whether or not the specific charge of "media imperialism" is hurled and whether or not enslavement to a TV or radio set is comparable to colonial subjugation, all the factors that have made Caribbean politics a politics of crisis and celebrity rule, of bullying and foreign intervention, remain. And all are influencing the course of media development in the region.

Obviously distressed by the Caribbean media's need for help from foreign professionals and responsible local governments, Lent nevertheless manages to deliver full evidence and to approach the question of media sovereignty from several angles. Sometimes his logic does not match his concern, and sometimes his habit of relegating the latest and liveliest information to cumbrous footnotes tries patience. But Lent gets exercised only over the issues that really matter, seldom strays off course, and strikes a happy balance between anecdotal portraiture and systematic criticism. If his book does not itself work necessary changes in the evolution of communications, it is at least apt to beget others of its kind that eventually might.

Third World Mass Media and Their Search for Modernity is an Associated University Presses publication. It can be obtained for U.S. $22.50 from AUP, Cranbury, New Jersey 08512 or AUP, Magalen House, 136-148 Tooley Street, London SE1-2TT, England. ■ *K.C.*

Call For Copy

DCR's editor invites readers to submit case studies on communication projects and analytical or descriptive articles on topics of general interest to *DCR* readers. Particularly welcome are unpublished manuscripts on innovative literacy efforts, development-communication projects in urban settings, project evaluation criteria and techniques, the role of the interpersonal communicator in communication and education projects, community development programs, and health-information campaigns. Photographs and samples of learning aids will also be gratefully accepted. ■

FAO's YEARS IN RURAL DEVELOPMENT COMMUNICATION

FAO's experience with rural broadcasting goes back many years, but the organization's broader-based activities in development support communication began only in 1970 with the establishment, in that year, of a Development Support Communication Branch in the Information Division. From its inception, the Branch concentrated on action-oriented field programs, involving mainly illiterate or semi-literate rural audiences.

Some of FAO's experience may interest others engaged in practical communication work in the Third World. Since rural broadcasting was FAO's first sphere of development communication activity, let us begin there.

Rural Broadcasting

FAO has assisted numerous governments in projects designed to establish or to improve the quality of rural broadcasting. Benin, Togo, Central African Republic, Bangladesh, Laos, Afghanistan, Mauritania, and People's Republic of Congo are among the countries assisted. If we try to identify the overall lessons learned from those projects, several salient points emerge. First, in the past, too much emphasis was placed upon radio as a *teaching* medium. Carried away with optimism generated by radio's ability to reach the remotest corner of almost every developing country, we all — governments and FAO — expected too much from it. We now know clearly that radio can be a vital support for development activities, especially as a means of arousing interest about innovations among rural populations and of motivating them to seek further information. But FAO now discourages project proposals based on the precept that radio can fulfill the primary functions of an extension service.

Experience has proven the utility of radio as a means of horizontal communication among rural communities, provided that the program producers concentrate on recording and broadcasting material about local problems and successful solutions, and provided that this material is recounted by the rural people themselves. But herein lies a major problem: it is difficult to promote such a model of people-based broadcasting if broadcasters from Third World countries continue to receive their training in formalized, studio-based broadcasting operations in the industrialized countries, and if developing-country governments view radio and other mass media mainly as organs of manipulative propaganda.

With regard to organized listening clubs, we have for the most part abandoned the rather rigid "radio farm forum" approach. The boom in transistor radios has completely changed the pattern of radio ownership in most countries; and where radio ownership is still low, we prefer to promote collective listening in existing groups (such as cooperatives or farmers' associations) rather than establish a new series of listening clubs that, in our view, often become elitist.

Cassette Tapes

In countries with a single national broadcasting organization — usually the case where the French or the British influenced matters — the problem of topicality arises when broadcasting agricultural subject matter. Agricultural and ecological/climatic conditions are seldom homogeneous enough to allow a nationally aired message — for example, that it is time to apply nitrogen top dressing to wheat — to be timely and relevant to more than a small proportion of farmers.

In particular, this problem plagued an FAO-assisted project in Afghanistan. Consequently, a pilot experiment with pre-recorded cassette tapes was launched as a means of localizing information. Taped programs (on five topics of known interest to farmers) and cassette recorders were supplied to extension workers trained by FAO to lead discussions based on the taped material. A baseline survey and a second survey after a three-month experiment in two provinces showed that awareness of the five problems covered, and knowledge of their solutions, had increased from three to seven times. These results were so encouraging that FAO is now promoting pre-recorded cassette tapes as a useful, cheap, and reliable medium for use where a national broadcasting network without local stations makes topicality a problem.

Filmstrips

Another low cost medium FAO considers worthy of particular attention is the filmstrip or slideset. The advent of relatively cheap projectors that can be run off main electricity supplies or off a 12-volt car battery make the slideset or filmstrip an invaluable audio-visual medium for field use. This equipment is especially useful when accompanied by a printed booklet containing reproductions of the photographs of the strip or slideset and the narration for each frame. Such booklets become manuals in their own right and, provided the photographs are printed large enough, an extensionist can sit down with three or four farmers and go through a booklet with them should it be impossible to organize a projection.

In FAO's experience, two problems have emerged in connection with filmstrips. The first is getting the strips and the projectors to the people who can effectively use them and providing such people with the necessary training. The second problem is that, although FAO's production of filmstrips is meant to be a catalyst in getting similar production under way by Third World governments, the catalytic effect we aim for is seldom achieved.

The distribution and training program is basically internal to national administrations. But time and perseverance are working in our behalf. The extension and training success being achieved by projects that systematically use tailor-made filmstrips will have its impact; and, perhaps, the projectors and filmstrips gathering dust in carefully locked drawers in many parts of the world will be recognized as useful and brought into action.

The problem of filmstrip production by governments of developing countries can almost certainly be overcome with more in-service training. FAO thus routinely endeavors to involve national staff when filmstrips are being produced for use by FAO-assisted projects, but an even greater training effort is certainly required.

Cine-Film and Video

Apprised of some of the problems encountered with filmstrips, the reader will not require much imagination to realize how much greater the problems are with cine-film. The time required to make films, high costs, and the medium's lack of flexibility all militate against its use (except in rare circumstances). And as for the mobile film-projection units so often built into projects as a communication panacea by planners who give no thought as to which films will be projected, we find such vans expensive to buy, costly to run, and likely to break down before long. Commonly, such units lie idle or get used for general transportation more than they get used for their intended purposes.

Small-gauge video, on the other hand, is proving highly successful in farmer training under the agrarian reform program in Peru. After a slow start, a team of young Peruvians helped by three FAO specialists is now making videotaped programs on many aspects of agricultural production and taking the shows out to farmers. The VTRs and monitors are quite frequently carried in a rucksack or on the back of a horse or mule to heretofore inaccessible communities. So much in demand are the videotaped training courses (backed up by practical training, instructors' notes, pupils' guides, and evaluation questionnaires) that some cooperatives have offered to pay to have more of them. Video equipment is also being used by the same team in Peru for social research. Obviously, video is not a medium we would recommend in all developing countries, but the Peruvian experience bodes well.

Postscript

It is often said the success of technical assistance projects depends on the government support they receive. This is especially true for development communication projects. FAO's experience indicates that effective communication can only be carried out by nationals among their fellow countrymen — perhaps with external assistance in training, planning and policy, procuring equipment, etc. It also pointedly suggests that worthwhile achievements have been wrought only when governments have made available good national staff and have maintained the strong interest shown when the original project was requested.

■ *Colin Fraser, Chief, DSC Branch, FAO, Rome*

What Extension Educators and The Mass Media Can and Can't Do — A Nutrition Education Project in India

In 1977 and early 1978 CARE's office in Tamil Nadu, South India, developed a mass media communication package addressed to slum women. Under the Modified Special Nutrition Program administered by the Social Welfare Department and CARE, supplementary nutritional and medical services were to be given to about forty thousand women and children through specially set up Child Welfare Centers in Madras, Coimbatore, Madurai, and Pudukittai.

The Intervention

As part of this program, a take-home ration of 700 grams of uncooked balahar (comparable to fortified semolina) is given to each beneficiary under six years old whose parents have accepted family planning or have fewer than three children. Pregnant and lactating women are also enrolled in the program, as are other women motivated to limit their family's size.

CARE trained and employed 48 female extension educators in conjunction with this project. Themselves slum women with but a modicum of education, these married mothers turned social change agents were versed in the rudiments of nutrition, health, and child-care. The work cut out for them consisted largely of motivating mothers to bring themselves and their children to the centers to receive the food supplement and medical care. These young project workers learned how to conduct cooking demonstrations using the food supplement and other locally available, cheap, and nutritious foods. They were also trained to organize women's meetings at which topics of community interest were discussed.

The mass media package was specially designed to help the interpersonal communicator reinforce her message and regulate and control message delivery. It is aimed at illiterate or semiliterate female slum-dwellers with strong beliefs about foods, pregnancy, and illness.

Never forgetting the low socioeconomic status of the target group and the restraints this status places on these women's ability to act on new knowledge, the project designers shared five assumptions and goals. First, pregnant women must eat the best available foods. Second, they must be able to identify these foods and to want them. Third, mothers must not rely solely upon breast milk to feed babies over five months old. Fourth, mothers must know about and use maternal and child-health centers regularly. Fifth, they must understand the importance of limiting family size. In short, the program goal is to create a climate of security in which mothers can learn that infant and child morbidity and mortality can be reduced and that women need not bear several children to make sure that a few survive.

Since the problems of nutrition, health, and family planning are usually related, CARE decided to treat them as parts of the same problem. Accordingly, the workers who visit the families deal with all these problems and stress the connections of one problem to another.

Similarly, the messages carried by comic books, radio dramas, posters, films, calendars, filmstrips, and flipcharts overlap and recur. When nutrition is the subect, the audience learns that too many pregnancies undermine a woman's nutritional state. Sanitation is linked to worm infestation, and better health to the start of infant supplementary feeding.

A fictitious but representative slum family has been created for use in the project materials. The man, Munniswamy — who has been vasectomized — is a rickshaw driver. Munniswamy, his mother, wife, and two children star in a comic book series that deals with infant nutrition, sanitation, de-worming, supplementary nutrition, immunization, vitamin A, vasectomy, tubectomy, the treatment of child illness, and the introduction of infants to supplementary foods. The family of Munniswamy and his wife Nuniamma also forms the nucleus of a radio 'soap opera.'

In the production of all media, the extension educator was kept very much in mind. Artwork was shown to her and modified according to her comments. (This sort of informal pre-testing revealed a strong preference for bright colors, which were used lavishly in the posters and comics.) Similarly, the communicator's language, that of the slum dweller, became the language of the messages.

In this project, what one medium lacks in terms of reach and coverage is supplied by another. Posters are displayed only at the centers, but the films are shown in all the city's theaters. The comic books are distributed to the beneficiaries by the extension educators, while the radio dramas carry the stories to a far wider audience.

The extension educator herself works with CARE personnel, helps identify different kinds of greens (some of which grow wild), and works out diets that are both inexpensive and nutritionally sound. She shows mothers how the same amount of money may be spent profitably or unprofitably and how family size relates to nutritional intake. When she conducts cooking demonstrations in slum areas, she drives her points home with posters, flipcharts, and comic books.

Every extension educator received notes on how to use the media CARE put at her disposal. She was also given a training manual that contains answers in the simplest language to the questions encountered in the field.

The messages prepared by CARE (all of which use Tamil), and CARE's media selection are now being evaluated by the Social Welfare Department.

The Environment

On the whole, Indian slum women have proved receptive to the ideas of better nutrition and of the need to limit family size (as the large number of tubectomies and the women's ability to recount the better sources of nutrition attest). But the woman does *not* control the family income, and she does not make all the decisions related to her own or her family's health.

If the mass media were directed *at men* to acquaint them with the dangers of repeated childbirth, the need of the pregnant woman for as much food as a manual laborer, and the availability of vasectomy as a simple means of limiting family size, needed changes might be easier to bring forth. Men need to be asked: "If you were a woman, how many children would you have?" They need to be told, in turn, that "If you are a true man, you will do something about it."

Women's lack of control over their destinies is, however, only one aspect of the cluster of problems that besets the communicator and the educator. Another is the neglect of the daily trials of the poor rural or slum family on the grounds that these problems are not "controllable." For instance, filmstrips, flipcharts, and posters tell a mother that she must supplement the baby's diet after five months; they even tell her how to make such food digestible. And of course they tell her that hygienic preparation of foods is of the utmost importance. But how can mothers whose homes have neither bathrooms nor running water practice even the most elementary hygiene?

Another problem concerns the need to reeducate doctors so that their directives can be synchronized with those of the extension workers. Project materials stress the need to take sick babies to a doctor, as most slum parents do. The doctor normally recommends a diet of arrowroot and administers an injection. While the treatment may cure the diarrheal episode, it does not cure the problem *(recurring* diarrhea) and it does not reinforce the messages of the interpersonal communicator. If the extension educator recommends giving a child with a simple stomachache food and plenty of water, so should the doctor (or vice versa). Additionally, the doctor should be discouraged from giving expensive treatments and encouraged to become an informal educator — to explain in simple language the nature and cause of the problem being treated.

Regardless of what the final evaluation says about the CARE project's impact upon maternal and infant health status in the area, two incontrovertible facts must be taken into account. First, the communicator cannot hope to accomplish much where basic facilities (such as potable water and adequate sewerage) are lacking. Second, media projects intended to benefit only women can succeed only partially, if at all.

■ *Manorama S. Moss, CARE-Tamil Nadu, College Road, Madras 6, India*

An Interview With Father Antonio Cabezas, Director of Radio Santa Maria

Antonio Cabezas met with the members of the Clearinghouse staff and that of its parent organization, the Academy for Educational Development, on March 7 in Washington. He played tapes of RSM programming and participated in a question-and-answer session that lasted over two hours. Part of the transcript of that fast-moving meeting is here reproduced — as much for the flavor as the facts.

Staff: What attracts students to *Radio Santa Maria?*

Cabezas: Opportunity. Fewer than 10 percent of the Dominican Republic's primary schools in the countryside go through the sixth grade, while *RSM* offers grades seven and eight too. We give people educational benefits that other institutions can't.

Staff: How were you able to convince education officials to allow you to certify students who study outside the formal school system?

Cabezas: It wasn't easy. I appeared before the Minister of Education over and over to plead our case. Over ten years, Ministers came and went. Maybe 15 held office during that time. Some of those 15 listened, especially as *RSM's* reputation and connections grew. With requests for information on *RSM* streaming into the Ministry of Education, the Minister eventually had no choice but to accredit the radio school.

Staff: What turned out to be your most compelling arguments in your case for official acceptance?

Cabezas: One was statistics. The Ministry knew full well how few of the country's rural primary schools offered all eight grades, and we were one answer to a big problem. Second, we were offering quality education, not a second-rate substitute. We had good textbooks, excellent teachers with master's degrees, and a curriculum based on government specifications. We were following all the rules, so the question was not "why?" but "why not?"

Staff: Does the Ministry contribute anything to the program?

Cabezas: Yes. The most valuable help it gives is recognition, but we have also received funds amounting to about $8,000. The Ministry does not pay the *RSM* teachers' salaries, but it doesn't choose the teachers either.

Staff: Does following the formal curriculum limit your freedom to teach what you think is useful?

Cabezas: Not much. With the educational level so low in the Dominican Republic, almost anything we do is basic and therefore practical in a sense.

Staff: Are you in fact covering material and offering courses not specified in the curriculum?

Cabezas: Oh yes. We do everything that is demanded of us and more. In our certificate classes, the official curriculum forms the basis of the lessons, but to this basis we add practical information. And, you must remember, *RSM's* accredited courses account for only part of the broadcasts. Our nonformal education programs cover a wide range of subjects.

Staff: Are your students tested?

Cabezas: Yes. The Ministry of Education oversees our testing procedures and examines the results of the tests on the subject matter it specifies. We test the students on the unofficial curriculum ourselves.

Staff: Are the Ministry's test monitors the same people who visit and inspect *RSM* at other times?

Cabezas: Yes. Two of the three people who supervise each exam are local public school teachers designated by the Ministry to act as supervisors. The third is an *RSM* teacher.

Staff: How do *RSM* students feel about taking standardized tests?

Cabezas: The tests do cause some problems, some uneasiness. But *RSM* students fare at least as well as in-school learners on these tests . . . We had to have some common ground — between the official schools and ours, that is — and we knew the government was not going to change, so we changed.

Staff: How do you bring real-life concerns into the curriculum?

Cabezas: We unite all the courses and all the concepts by weaving a social theme into each week's lessons, one that is important and often timely but that will not upset the students.

Staff: If the theme flows through both the nonformal and the cultural aspects of the radio program, doesn't the emphasis become rather overwhelming?

Cabezas: No, because each theme has so many variations. Take the theme of "family," for example. It can be approached from any number of perspectives. We might develop broadcast segments on 20 aspects of family life. Each will differ from the rest, so students get a feeling of continuity, not of repetition. We examine the formal curriculum through the lens of our chosen topic and always come up with some interesting angles. We also use a variety of formats, many of them dramatic, to keep the programs from growing stale.

Staff: What kind of listener ratings does *RSM* get?

Cabezas: I don't have the figures. I doubt if anyone in the Dominican Republic does. But I do know that the money we get from advertisers is twice what the commercial stations in our area get for the same amount of air time.

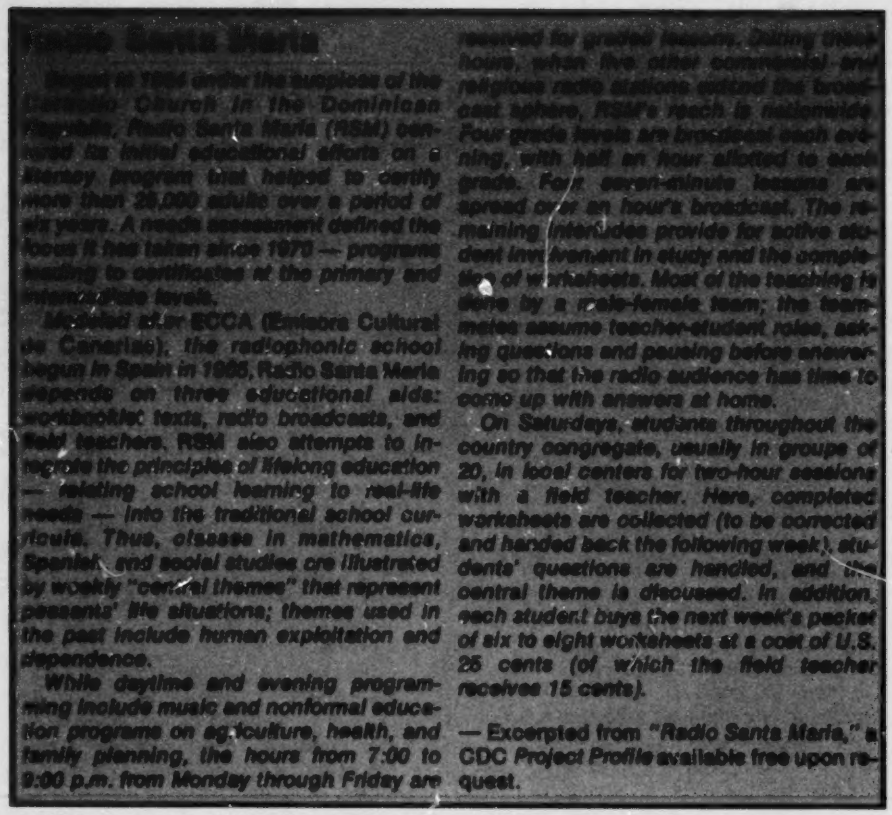
Staff: What sort of people hold the microphone when you make field recordings and who runs the tape recorders? Farmers and peasants? Co-op leaders? Media professionals?

Cabezas: We put our 20 portable tape recorders in the hands of people we think are going to be articulate and are going to bring back good material. That can mean just about any responsible person.

Staff: You've said that people can use the recorders in whatever way they choose, but that sounds too easy. Who decides what will be broadcast, what will be edited, and what will be discarded?

Cabezas: The director of each department at the station. If a person has a tape that he thinks is suitable for the Open University format, he will take it to the Open University Department and the members of the department will edit it and schedule it as they see fit.

Staff: What importance do you think *RSM's* relationship with the Catholic Church had in either motivating people to



Radio Santa Maria

Begun in 1966 under the auspices of the Catholic Church in the Dominican Republic, Radio Santa Maria (RSM) centered its initial educational efforts on a literacy program that helped to certify more than 28,000 adults over a period of six years. A needs assessment defined the focus it has taken since 1979 — programs leading to certificates at the primary and intermediate levels.

Modeled after ECCA (Emisora Cultural de Canarias), the radiophonic school begun in Spain in 1965, Radio Santa Maria depends on three educational aids: workbooklet texts, radio broadcasts, and field teachers. RSM also attempts to integrate the principles of lifelong education — relating school learning to real-life needs — into the traditional school curricula. Thus, classes in mathematics, Spanish, and social studies are illustrated by weekly "central themes" that represent peasants' life situations; themes used in the past include human exploitation and dependence.

While daytime and evening programming include music and nonformal education programs on agriculture, health, and family planning, the hours from 7:00 to 9:00 p.m. from Monday through Friday are reserved for graded lessons. During these hours, when five other commercial and religious radio stations control the broadcast sphere, RSM's reach is nationwide. Four grade levels are broadcast each evening, with half an hour allotted to each grade. Four seven-minute lessons are spread over an hour's broadcast. The remaining interludes provide for active student involvement in study and the completion of worksheets. Most of the teaching is done by a male-female team; the teammates assume teacher-student roles, asking questions and pausing before answering so that the radio audience has time to come up with answers at home.

On Saturdays, students throughout the country congregate, usually in groups of 20, in local centers for two-hour sessions with a field teacher. Here, completed worksheets are collected (to be corrected and handed back the following week), students' questions are handled, and the central theme is discussed. In addition, each student buys the next week's packet of six to eight worksheets at a cost of U.S. 25 cents (of which the field teacher receives 15 cents).

— Excerpted from "Radio Santa Maria," a CDC *Project Profile* available free upon request.

participate or convincing the government that you should be allowed to do somewhat unconventional things?

Cabezas: The Catholic Church in our particular region actually lets us do whatever we want to do. Of course, the backing of the Church helps tremendously because people in our region are deeply religious. When you say "I work for *Radio Santa Maria,*" all the doors open. A private citizen acting on his own would find most of those same doors closed . . . But, just as important as church support is the fact that the radio station broadcasts material that is in line with our nation's values.

Staff: The charisma of the founder often seems critical to the success of a development program, at least until that energy can be transferred. How do you intend to transfer your own enthusiasm and to keep *RSM* dynamic?

Cabezas: Our reputation helps perpetuate our work. *RSM* now has power in the eyes of politicians at election time. We also get invited to seminars and meetings with the Ministers of Agriculture and Education because we are well-known and have a large constituency.

As for the question about personal enthusiasm, I think the answer is that it is vital but also contagious. For example, the Peruvian government has employed many of *RSM's* methods successfully and without the help of the Church or religious leaders. I don't doubt that in another country or another region, another institution has the same potential. ■

Village-Level Organization — The Link Between Agricultural Research and Farmers' Fields

(Part I of this article appeared in DCR Issue 22.)

The efforts made so far to transfer newly developed technology from agricultural research centers to farmers' fields can be classified by approach as being either individual-oriented or community-based.

The individual-oriented approach depends upon the services of the extension agent, who is supposed to visit villages and contact individual farm families. Its successes can be credited to two variables: the efficiency of the system and to the cooperation of the farmers served by it. Its many failures at keeping farmers up-to-date on agricultural achievements made at research stations reflect an impractical resolve to reach every farmer and a basis in experience and ideas borrowed from western countries, the U.S.A. in particular.

Studies show that these services are strongly biased toward the needs of the more well-to-do and progressive, even entrepreneurial, farmers. Yet, since rich and educated people in developing countries tend to have their own sources of specialized information — an agricultural specialist, a commercial dealer, an educated child, etc. — they require the extension service only during emergencies.

The clientele of the extension service tends to be composed of farmers who are in least need of help, partly because extension agents tend to spend more time with people who can understand and thus appear receptive to new ideas. As Neils Roling and Joseph Ascroft report, fieldworkers they asked to recruit farmers to attend training courses invited primarily farmers with higher than average incomes — ostensibly because they knew these farmers best and because most of them were not adequately trained in either the subject matter or the means of transferring new information to farm families. A lack of mobility and an impossible workload can also worsen the problem.

The other approach to reaching farm families emphasizes working with organized groups at the village level to promote cognitive and behavioral changes. This approach is based on the assumption that people live and function in groups and that peer-group influence helps shape individual behavior. Meeting and working in groups tends to reduce individuals' anxiety, fear, and uncertainty — as is evident in a Jordanian program designed to transfer newly developed technology to farmers' fields.

A wheat-improvement project in Jordan is achieving significant results in convincing farmers to adopt new production practices by channeling its activities through village-level organizations, mainly agricultural cooperatives. Project workers recruit farmers with small land-holdings to form agricultural cooperatives through which members purchase inputs such as cleaned and treated high-yielding seeds, fertilizers, chemical weed-controls, and farm machinery needed for land preparation and harvesting. Farmers pay the cost of these services after the harvest, in produce if they like. If the crop fails, farmers may delay payment until the next harvest.

The communication component of the cooperatives has contributed significantly to their efforts to convince farmers to adopt new technology. The cooperatives have provided farmers with the chance to make contacts, meet, and (often) articulate and discuss their problems with each other's help and with that of government agricultural officials and of cooperative personnel. Besides providing the farmers with the opportunity to learn about new ideas, this system enables the farmer to adopt or reject an innovation on the basis of what he knows about the opinions and behavior of peers, friends, and relatives.

Before using a new technology, farmers with small farms want to weigh its costs and make sure that it produces enough gain or profit to justify abandoning the old and familiar method. Because few of them are able or willing to bear the risk individually, because most of them calculate and evaluate every conceivable implication before trying the new, and because adopting a new technology is adopting a new behavior that has social risks involved, the advantages of group learning and group activity need only be presented to be appreciated.

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Village-Made Educational Materials: Three Experiments That Worked

In the absence of two-way communication systems, in which materials-producers receive feedback from villagers, the development of irrelevant centrally-produced materials that advocate inappropriate solutions to development problems continues. Ironically, these materials perpetuate the myth that only the "experts" hold the key to social change. To deal that very myth a blow, we have tried to work out alternatives to "expert" and centralized materials production. The following sketches show how our methods worked in three development projects in Africa.

Cattle-Dip Management Program

To conquer tick-borne diseases, every cattle owner must dip all his stock egularly in a chemical bath. At the onset of the Cattle-Dip Management Program near Sotik, Kenya, however, the dipping facilities were not being kept in good condition and the dip was often too weak to work.

Moreover, some farmers did not dip their cattle at all, others did so only irregularly, and most dipped only upgraded animals (thereby leaving the disease-resistant indigenous Zebu livestock carrying infected ticks).

Discussions with local farmers and veterinary staff quickly revealed that many farmers did not fully understand how dipping livestock controls ticks. They also revealed that those farmers who understood the importance of dipping refused, logically enough, to pay dipping fees when the chemical was understrength and thus ineffective.

Veterinary extension personnel had been attempting to tackle these problems by meeting with cooperative staff and farmers. But because these local fieldworkers were not familiar with alternative approaches to adult education, education by exhortation had become the norm and the extension personnel's efforts were unsuccessful.

To facilitate learning activities with both cooperative personnel and farmers, we developed various audio-visual materials: three-dimensional models, chemical demonstrations, locally shot black-and-white photographs depicting improved animal-husbandry practices, and black-and-white photobooklets with Swahili captions and companion tapes in the local language.

These materials were most often used right at the dipping facilities so that farmers who dipped irregularly or who dipped only their upgraded stock could be reached. The materials were also used at farmers' meetings to encourage those who did not dip any of their cattle to join the communal dipping program, and at cooperative committee meetings called to address management problems .

During these learning activities, *Wazee* (Swahili term of respect for "elders") were encouraged to tell of past animal-husbandry practices so that all farmers could begin to reflect upon the changes that had taken place as well as fathom their implications. Questions were referred back to the group so that all the farmers were free to answer. At these meetings local information sources were identified by the program staff members, who refrained from introducing outside information until they knew for certain that this information would be appropriate.

Gradually, discussion and proposals that incorporated community knowledge gave birth to relevant solutions, many of which were later successfully implemented. Management of the dips became more efficient, greater emphasis was placed upon maintaining the correct chemical concentration in the dip tanks, an improved system of record-keeping was devised and put to use, and much-needed repairs to the dipping facilities were made. Consequently, the number of cattle deaths due to tick-borne diseases dropped significantly following the start of the program.

Chebilat Women's Group Program

In 1972, the Chebilat Women's Group was stumbling in its move toward self-management and total self-reliance. Although the group was organized on a cooperative and democratic basis, members were not participating in management and decision-making, the steering committee was diffident, and the day-to-day management was being handled by a young woman without adequate organizational and accounting skills. The group was losing money when it should have been turning a profit, the women were growing suspicious of each other and particularly of those in charge of funds, and group cooperation was becoming impossible.

Informal discussions with individual members revealed that many women deplored the situation and recognized the roots of the problems facing the group. Yet, because "top down" decision-making had become the norm, these women felt they could not speak out at meetings, and the early enthusiasm of group members had soured and turned to apathy.

Suspicion had to be tackled first. If women could read and write numbers, we reasoned, they could then check their own "credit cards" as well as assume more managerial responsibility. To eliminate suspicion, as well as to promote basic numeracy, we developed number games, taped exercises in the local language, devised calendars to help women read numbers and plan activities, and obtained blackboards and chalk.

The women clearly enjoyed playing the games and using the cassette tape recorder. Those with some arithmetical skills acted as facilitators and led meetings, though all actively helped each other identify and write numbers. Attendance at meetings was sporadic, however, despite the keen interest of some members. Apparently, even though all took pleasure in learning through problem-solving, most women would not participate fully in the absence of well-defined and group-recognized needs. Consequently, we began to use the cassette tape recorder to facilitate dialogue among group members. We gave women who were reluctant to speak out during women's group meetings the chance to tape record their comments in private.

A cassette tape recorder and blank tapes were circulated among individual members, who were asked to record their opinions. In small groups, informal interviews and discussions were recorded. The tapes were then replayed for other women who, in turn, were asked to respond on a tape to what they heard. As more women expressed their dissatisfaction with the management of the group and as others listened to these tapes, women began to meet to discuss the group's problems and to forge solutions.

Their decisions, *all of which were implemented,* included the agreement to train three women in management and accounting techniques, to hold regular general meetings, to develop guidelines for management and decision-making, to establish a small-scale loan scheme, to institute strict rules governing payouts, to build an office, and to rent land for the communal production of cash crops.

Members of the Chebilat Women's Group have continued to move forward toward self-management and self-reliance. Although finding steady markets for their handicrafts remains a problem, returns on their communal farming activities have made the problem easier to bear. They built a crop storage bin in 1975, and they plan to increase their acreage.

The Local Production Program

We initiated the Local Production Program in 1976 to further explore the potential of small media in community development. In particular, we saw the need for both problem-posing and informative materials, and for teams of "producers" who live more or less permanently in the community. Trained in the various uses of simple media and in materials production, these producers would count on other villagers to help find information, serve as resource people, and help produce materials. At the very least, villagers would be involved in a new and creative experience. At most, these activities would facilitate social and economic development.

Equipment and Training Specifications. Although training focused mostly on the producers, other villagers were also encouraged to experiment with various pieces of equipment. Generally, the villagers were trained on the spot as a need to use a certain device arose.

We started activities with three cassette tape recorders, all of which had digital

counters, built-in microphones, fast-forward and review mechanisms, and the capability to use either electricity or 12-volt wet cells. We also had two fixed-lens cameras, and two portable slide-projectors.

Training consisted of hands-on operation. The average person learned how to operate and maintain a recorder in about two hours, and nobody found the task impossible. On the other hand, many older people could not take clear photographs simply because their eyesight was too poor, and all found mastering even basic photography more time-consuming than learning to use tape recorders.

Little money was available for film, so only two members of the production team were trained in black-and-white developing techniques. After we helped them develop two rolls of film, they were able to develop negatives on their own. When film was not developed properly, we had the producers retrace the steps they had taken in order to identify the problem. The procedure was simple and satisfying, so understanding came rapidly.

Photosketching, a process whereby a projected negative or picture is drawn onto paper, proved easy for the beginner to use to create informative and problem-posing posters. After one or two tries, people invariably began to see the importance of excluding irrelevant background details. (At times, in fact, the photosketched posters they made were clearer and easier to read than the negatives from which the photosketches were drawn.) Adults in training quickly learned to use two or more negatives to compose a picture and to move the projector closer or farther from the paper to enlarge or reduce images.

Materials Production. We began local production activities with five villagers. Four of them had previously worked with adults through the government extension services and one had taken part in the Chebilat Women's Group Program. All had been exposed to centrally produced materials, and three had used these materials with groups of local villagers.

At first, topics for the information materials were chosen on the basis of the availability of resource people. Later, when the team was more experienced, we encouraged its members to seek out information of interest to them.

The first series of materials were, of course, not technically perfect. At first, as much time was spent introducing the resource person as conveying the information. Then too, commentaries tended to be long, rambling, and full of irrelevant details since illiterate resource people could not use scripts.

But, with experience, most villagers could produce excellent informative materials. The tapes they made were equal in quality to the centrally produced tapes we had used, if not better. The producers learned to use sound-dubbing procedures to create mixed tapes of recorded discussions, interviews, commentaries, music, and sound effects. Photoessays proved more difficult to produce, but with practice and the constructive criticisms of resource people and other villagers, the producers developed clear and concise examples of the medium.

Problem-Posing Materials Production. The production of problem-posing material was not begun until the producers knew how to use simple media to convey information. Nevertheless, far more time had to be spent and a different approach had to be used to help villagers produce problem-solving materials. Prior to production, community problems were identified by means of a four-week listening survey. While going about their daily business, the producers and others simply took note of people's complaints. They based the materials on the problems mentioned most often.

Most villagers initially involved in production activities were themselves experiencing the problems to be depicted in the codes and thus found it difficult to distance themselves enough to portray community life. We consequently found ourselves deeply involved in all aspects of production — instead of on the sidelines as we had been. We helped villagers identify problems and needs and initiated discussion on how best to present the effects of problems. This process did help people analyze their own situations, but when we withdrew our active support, production halted.

The production standstill forced us to change our approach. Instead of attempting to involve many villagers as we had done in developing informative materials, we narrowed our focus to the production team. We reasoned that if the production team could be trained to produce effective problem-posing materials, they could then use these materials with other groups of villagers. The objective, analytical dialogue, would occur in each case — within the production team as a result of developing codes and in group discussions during which the codes would be used.

To acquaint the team with our purpose and with production techniques, we prepared a script for a taped socio-drama. We asked team participants to take parts in this drama, discussed their particular roles, and then tape-recorded the performance "ad-lib" for later replay. In the discussion that followed the replay, we focused on the problem portrayed and then examined the group dynamics involved in problem-solving. This activity plus a little more experience equipped three of the five participants to develop effective problem-posing materials unaided.

Facilitators. Two different groups of facilitators took part in the Local Production Program. One was organized by us as a production team, and the other emerged by virtue of its voluntary involvement. The created group trained other villagers in the use of equipment, organized activities, and encouraged villagers to act as resource people, as well as to help produce materials. This group used many of the finished materials in their work with groups of local villagers. They also attended a brief seminar during which problem identification, leadership, discussion methods, and the best uses of various materials were discussed. All but one of these facilitators expected payment for their time and effort.

The second group of facilitators emerged unexpectedly. These villagers were proud of their accomplishments in production activities and wanted to show others the materials they had developed. For members of this group, personal satisfaction was payment enough.

Program Effectiveness. Observation and discussions with the participants at all levels were the evaluative tools. Together both validated several conclusions. First, the act of producing materials itself gave rise to analytical dialogue. Second, by interacting with nonformally educated adults in a mutual learning experience, the producers came to realize that problem-solving need not be left to experts. Third, exposure to different kinds of locally available information prompted the producers to take constructive action — planting trees, setting up a chicken project, using contraceptives, etc.

For the resource people — average villagers — a new self-respect and confidence grew out of their involvement in materials production. Yet, only when the production of problem-posing materials began, when information was sought and materials developed that addressed the real problems of the majority of villagers, did the whole village begin to feel the effects of the project.

Conclusion

Educational strategies that leave villagers passive, unmotivated, resistant to change, and unproductive are those that bid villagers to implement solutions that have been determined for them. In contrast, adult education approaches that involve villagers in a total process — reflection, dialogue, and action — are those that respect and take seriously the vast accumulated experience and knowledge villagers possess. These latter approaches invite villagers to identify and analyze their problems, to reflect upon their experience, and to recognize that truly liberating change must begin with the villagers themselves.

The impact of the Local Production Program on the producers, the resource people, and the community — the increased levels of awareness, the changes in attitudes, and the action taken — has convinced us that small media can play a leading role in adult education. If our conclusion is not novel, our evidence is nevertheless compelling.

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Dilemmas in Country X: Candid discussions about failures

The following dilemma was submitted anonymously by a frustrated nutritionist. More a case study than a story, it is the analytical exploration of a development effort that stalled because stated institutional goals and the beliefs of those assigned to carry the goals forward were out of kilter.

(The editor invites readers to submit reports for this column. Authors' names — as well as those of the people, agencies, and countries involved in the projects — will be withheld upon request.)

The Brazilian educator Paulo Freire and some of his colleagues spent the 1950s and 1960s developing a now famous pedagogy that would liberate rather than domesticate disadvantaged people. Of late, Freire's ideas have found expression in more concrete terms as researchers have devised ways to code people's behavior on the basis of writing samples and speech. But Freire's contention that social and political consciousness develops in three stages still provides insights into the development process. He says, in brief, that people who possess *critical-stage consciousness* of their world are concerned with transforming the social system, that people who possess a *naive-stage consciousness* are concerned with reforming individuals (who are seen as the true cause of injustice), and that people who possess *magical-stage consciousness* fatalistically accept things as they find them.

I am oversimplifying these terms to lay the groundwork for a problem that has been bothering me since my return from a stay as a nutrition consultant in Country X. The problem is really a question: Can a development project whose planning documents reflect critical-stage consciousness be successfully implemented by people whose behavior reflects magical-stage and naive-stage thinking?

Two years before I arrived in Country X, its health ministry had conducted a sector analysis that revealed, among other problems, discrimination against provincial and local health officials (mostly medical technicians and educators) by central office bureaucrats (mostly doctors). One year before I arrived, the Ministry of Health had hooked up with an international organization willing to fund needed changes. Shortly before I arrived, a task force composed of four high-level urban bureaucrats within the Ministry and six consultants supplied by the international agency had been formed to revamp the Ministry. The task force had no rural or provincial members, although it did interview rural people to get disease histories, assess living conditions, and size up local attitudes toward certain foods. The project documents drawn up by the task force heavily stressed changing the Ministry's norms, administrative procedures, regulations, and laws. In particular, a new series of guidelines prepared under its direction spelled out in detail how offices and individuals were to cooperate. These guidelines also redefined the decision-making process, delegating unprecedented power to middle-level administrators. Other documents specified that the lion's share of the total health-sector investment was to be used on nutrition projects at the provincial level. None of the plans took interpersonal concerns into account and all focused on systems, principles, and procedures — an indication that the task force possessed a critical-stage consciousness.

The 15-member group within the Health Ministry that was charged with implementing the 10-site project, in contrast to the task force, consisted primarily of middle-level health planners, nutritionists, dieticians, and administrators. Most of the group had urban backgrounds, and those who had attended rural schools played down the fact. Hence, it soon became painfully clear that the goals that the Ministry of Health had embraced as an institution were not in accord with the priorities and beliefs of the Ministry's middle-level personnel. In a bind, team members resorted to blaming authorities, avoiding action, and attacking each other whenever a problem came up. They resorted, that is, to the kind of behavior characteristic of those with naive-stage or magical-stage consciousness.

Not surprisingly, this project's goals have been seriously compromised, and the nutritional status of the rural poor in Country X has not improved materially. Yet, the implementation team is not solely at fault. While project documents seemed to reflect critical-stage thinking, the failure of project planners to include rural and provincial people in the task force shows an utter lack of good sense. It also shows that critical consciousness is not a mental exercise but a mental state born of experience and maybe even of physical suffering: perhaps only those who have shared the problems (diseases and inadequate diets in this case) of the disadvantaged themselves possess the potential to acquire critical consciousness. At any rate, outsiders cannot expect to solve the problems of the rural poor by collaborating with the urban elite. If they do, the contradictions between the goals they put on paper and the force of ingrained bureaucratic traditions may be counted upon to paralyze those caught in the middle. ■

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